

IN THE CLAIMS:

Claims: 1 to 44 (cancelled)

Claim 45 (new). A process for the preparation of (+)2-(4-chlorophenyl)-3-methylbutanoic acid (+CPA), which comprises:

(a) mixing (\pm)2-(4-chlorophenyl)-3-methylbutanoic acid (\pm CPA) with a resolving agent comprising optically active (S)(-) α -phenylethylamine (PEA) in a solvent system comprising an alcoholic solvent and water under conditions wherein the (\pm)2-(4-chlorophenyl)-3-methylbutanoic acid (\pm CPA) and the resolving agent react to form a mixture comprising enantiomeric salts;

(b) cooling the mixture to form a resultant mixture comprising crystallized (+)CPA-(-)PEA salt and dissolved (-)CPA;

(c) separating the crystallized salt in the resultant mixture from the dissolved (-)CPA;

(d) refining the crystallized salt by treating the crystallized salt with the alcoholic solvent and water; and

(e) recovering (+)CPA from the refined salt.

Claim 46 (new). The process as claimed in claim 45, wherein the refining step (d) comprises at least one step of dissolving the crystallized salt in the alcoholic solvent and water and recrystallizing the salt.

Claim 47 (new). The process as claimed in claim 46, wherein the refining comprises at

most two recrystallizing steps and results in the recovery in step (e) of (+)CPA with an optical rotation of greater than +40.5°.

Claim 48 (new). The process as claimed in claim 45, further comprising the step of recovering the optically active (S)(-)- α -phenylethylamine (PEA) and recovering the (-)CPA.

Claim 49 (new) A process as claimed in claim 45, wherein the alcoholic solvent is selected from the group consisting of propanol, -butanol, sec-butanol, iso-butanol, and tert butanol.

Claim 50 (new) A process as claimed in claim 45, wherein the solvent system is an aqueous mixture of butnaol.

Claim 51 (new) A process as claimed in claim 45, wherein the resolving agent in step (a) is present in an amount of 0.4 to 0.65 mole per mole of (\pm) CPA.

Claim 52 (new) A process as claimed in claim 45, wherein the PEA is added in neat form or in the form of a solution.

Claim 53 (new) A process as claimed in claim 45, wherein the PEA is added to the mixture in step (a) in one lot or over a period of time ranging from 10-60 minutes.

Claim 54 (new) A process as claimed in claim 45, wherein the PEA is added to the

mixture in step (a) at a temperature in the range of 30 to 100°C.

Claim 55 (new) A process as claimed in claim 45, wherein the PEA is added in step (a) to a CPA solution.

Claim 56 (new) A process as claimed in claim 45, wherein in step (a), a racemic CPA solution is added to the PEA.

Claim 57 (new) A process as claimed in claim 45, wherein the solvent is present in the mixture in step (a) in a range of 20-40% as aqueous solution and two to three times by weight based upon an amount of CPA.

Claim 58 (new) A process as claimed in claim 45, wherein the reaction in step (a) is carried out over a period of 2 to 6 hours.

Claim 59 (new) A process as claimed in claim 45, wherein the crystallized salt is separated in step (c) at a temperature in the range of ambient to 80°C.

Claim 60 (new) A process as claimed in claim 45, wherein the crystallized salt is separated in step (c) by filtration or centrifugation.

Claim 61 (new) A process as claimed in claim 45, wherein the alcoholic solvent is selected from the group consisting of propanol, isopropanol, butanol, 2-butanol, and tert butanol.

Claim 62 (new) A process as claimed in claim 45, wherein the salt is refined in step (d) at a temperature ranging from 40 to 120°C.

Claim 63 (new) A process as claimed in claim 62, wherein the alcoholic solvent is present in step (d) in a range of 20-40% as aqueous solution and one to four times by weight based on the amount of the salt.

Claim 64 (new) A process as claimed in claim 62, wherein the refining step has a duration range of 3-5 hours.

Claim 65 (new) A process as claimed in claim 45, wherein the recovering step (e) comprising liberating the (+) CPA from the salt using a mineral or an organic acid.

Claim 66 (new) AS process as claimed in claim 65, wherein the mineral acid is selected from the group consisting of hydrochloric acid and sulphuric acid.

Claim 67 (new) A process as claimed in claim 66, wherein the mineral acid is an aqueous sulphuric acid.

Claim 68 (new) A process as claimed in claim 65, further comprising combining an aqueous mineral acid layer containing the crystallized salt with an aqueous mineral acid layer obtained from recovery of the (-) CPA.

Claim 69 (new) A process as claimed in claim 48, wherein the step of recovering the

(-) CPA comprises concentrating a mother liquor enriched with (-) CPA salt obtained after step (b) is concentrated at reduced pressure for recovery of the (-) CPA.

Claim 70 (new) A process as claimed in claim 69, wherein the (-) CPA salt after concentration is treated with an aqueous mineral or organic acid, extracted with a hydrophilic or hydrophobic organic solvent and concentrated under reduced pressure.

Claim 71 (new) A process as claimed in claim 70, wherein the aqueous mineral acid is selected from the group consisting of hydrochloric acid and sulfuric acid.

Claim 72 (new) A process as claimed in claim 71, wherein the aqueous mineral acid is aqueous sulfuric acid.

Claim 73 (new) A process as claimed in claim 70, wherein the aqueous mineral acid is treated with an organic solvent selected from the group consisting of dichloromethane, dichloroethane, chloroform, toluene and hexane.

Claim 74 (new) A process as claimed in claim 70, wherein the aqueous mineral acid is treated with an organic solvent comprising toluene.

Claim 75 (new) A process as claimed in claim 70, further comprising combining a first aqueous mineral acid layer containing the crystallized salt with a second aqueous mineral acid layer obtained from recovery of (+) CPA to effect a recovery of the resolving agent.

Claim 76 (new) A process as claimed in claim 75, wherein the first and second aqueous mineral acid layers are mixed, cooled and extracted with aqueous caustic lye solution at a concentration ranging from 20-80% to recover the resolving agent.

Claim 77 (new) A process as claimed in claim 76, wherein a concentration of the aqueous lye solution is in a range of 30-60%.

Claim 78 (new) A process as claimed in claim 45, wherein the PEA recovered is recycled for use in step (a).

Claim 79 (new) A process as claimed in claim 77, wherein the extraction with the lye solution results in an alkaline layer that is extracted with hydrophilic or hydrophobic organic solvent selected from the group consisting of benzene, toluene, hexane, dichloromethane, dichloroethane and chloroform.

Claim 80 (new) A process as claimed in claim 79, wherein the solvent for extraction of the alkaline layer is selected from benzene, toluene and hexane.

Claim 81 (new) A process as claimed in claim 79, wherein the solvent for extraction of the alkaline layer is toluene.